## Contents of Aquaculture, Volume 115

**VOL. 115 NOS. 1/2** 

15 AUGUST 1993

Diseases, Parasites and Predators	
Characteristics of the causative bacterium of vibriosis in the kuruma prawn, Penaeus japonicus	
L.D. de la Peña, T. Tamaki (Higashi-Hiroshima, Japan), K. Momoyama	
(Yamaguchi, Japan), T. Nakai and K. Muroga (Higashi-Hiroshima, Japan)	1
Genetics and Breeding	
Inheritance of albinism in the grass carp, Ctenopharyngodon idella	
S. Rothbard (Gan Shmuel, Israel) and G.W. Wohlfarth (D.N. Hof Hacarmel,	
Israel)	13
Husbandry and Management	
Relative performance of three bottom grazing fishes (Cyprinus carpio, Cirrhinus	
mrigala, Heteropneustes fossilis) in increasing the fertilizer value of phosphate rock	
B.B. Jana and S.N. Sahu (Kalyani, West Bengal, India)	19
Hatchery culture potential of the scallop Chlamys australis in Western Australia	
D.A. Cropp (North Hobart, Tasmania, Australia)	31
Reproduction, spawning behaviour and captive breeding of the common wolffish Anarhichas lupus L.	
T. Johannessen, J. Gjøsæter and E. Moksness (His, Norway)	41
Nutrition	
Evaluation of two shrimp by-product meals as protein sources in diets for <i>Penaeus</i> vannamei	
L.E. Cruz-Suárez, D. Ricque-Marie, J.A. Martínez-Vega and P. Wesche-Ebeling (San	
Nicolás de los Garza, N.L., Mexico)	53
Polyunsaturated fatty acid nutrition in juvenile freshwater prawn Macrobrachium rosenbergii	
L.R. D'Abramo and SS. Sheen (Mississippi State, MS, USA)	63
Effects of algal diet on the energy available for growth of juvenile sea urchins Loxechinus albus (Molina, 1782)	
M.L. González, M.C. Pérez, D.A. López and C.A. Pino (Osorno, Chile)	87
Observations on the chemical composition of some commercial prawn feeds and associated growth responses in <i>Penaeus monodon</i>	
Z. Sarac, H. Thaggard, J. Saunders, M. Gravel (Bellara, Australia), A. Neill	
(Brisbane, Australia) and R.T. Cowan (Ipswich, Australia)	
Effect of feeding different levels of sardine oil on growth, muscle composition and digestive enzyme activities of mahseer, <i>Tor khudree</i>	
M. Muzaffar Bazaz and P. Keshavanath (Mangalore, India)	111
Histological histochemical and ultrastructural analysis of the gastric mucosa in	

Oncorhynchus mykiss M.V. Ostos Garrido, M.I. Nuñez Torres and M.A. Abaurrea Equisoain (Granada	
Spain)Stos Gairido, W.I. I Nullez Torres and W.A. Abaurrea Equisoari (Granada	12
Physiology and Endocrinology	
Retardation of ovarian growth and depression of serum steroid levels in the tilapia,	
Oreochromis mossambicus, by cortisol implantation	123
J.T.W. Foo and T.J. Lam (Singapore, Singapore)	135
Serum cortisol response to handling stress and the effect of cortisol implantation on testosterone level in the tilapia, Oreochromis mossambicus	
J.T.W. Foo and T.J. Lam (, Singapore)	144
Induced spawning of catfish, Heteropneustes fossilis (Bloch), using D-Lys <sup>6</sup> salmon	
gonadotropin-releasing hormone analog	
D. Alok, T. Krishnan, G.P. Talwar and L.C. Garg (New Delhi, India)	159
Salinity tolerance of juvenile scallops (Pecten maximus L.) at low temperature	
Ø. Strand, P.T. Solberg, K.K. Andersen and T. Magnesen (Bergen, Norway)	169
Book Review	10.4
Aquaculture needs for 2000 AD	181
VOL. 115 NOS. 3/4 1 SEPTEMBE	ER 1993
Diseases, Parasites and Predators  Marine environment as reservoir of birnaviruses from poikilothermic animals  C. Rivas, C. Cepeda, C.P. Dopazo, B. Novoa, M. Noya and J.L. Barja (Santiago d	
Compostela, Spain)	., 103
B. Spanggaard, F. Jørgensen, L. Gram and H. H. Huss (Lyngby, Denmark)	195
administration to cultured rainbow trout (Oncorhynchus mykiss)	200
K. Uno (Konan, Aichi, Japan), T. Aoki and R. Ueno (Tsu, Mie, Japan)	209
naturally-infected cultured sea bass	
R.M. Pinto (Barcelona, Spain) and P. Alvarez-Pellitero (Castellón, Spain)	221
Changes in an immunoglobulin M (IgM)-like protein during larval stages in tilapia,  Oreochromis mossambicus	
A. Takemura (Okinawa, Japan)	233
The relevance of infectious pancreatic necrosis virus (IPNV) in farmed Norwegian turbot (Scophthalmus maximus)	
S.H. Mortensen (Bergen-Nordnes, Norway), Ø. Evensen (Oslo, Norway),	*
O.M. Rødseth and B.K. Hjeltnes (Bergen-Nordnes, Norway)	243
Genetics and Breeding	
Evaluation of Oreochromis niloticus × O. aureus hybrid progeny of different	
geographical isolates, reared under varying management regimes	
G Hulata G W Wohlfarth I Karplus G I Schroeder S Harraz A Haley	

S. Rothbard, S. Cohen, I. Israel and M. Kavessa (Dor, Mobile Post Hof Hacarmel, Israel)	253
Gametic incompatibility in wild and cultured populations of the eastern oyster,  Crassostrea virginica (Gmelin)	23.
P.M. Gaffney, C.M. Bernat (Lewes, DE, USA) and S.K. Allen, Jr. (Port Norris, NJ, USA)	273
Husbandry and Management	
Development of large-scale hatchery production techniques for <i>Amusium balloti</i> (Bernardi 1861) in Western Australia	
D.A. Cropp (North Hobart, Tasmania, Australia)	285
Nutrition	
Effect of feeding rate and water temperature on growth of juvenile white sturgeon (Acipenser transmontanus)	
S.S.O. Hung, P.B. Lutes, A.A. Shqueir and F.S. Conte (Davis, CA, USA) Evaluation of protein quality in fish meals by chemical and biological assays	297
J. Stewart Anderson (Charlottetown, Prince Edward Island, Canada), S.P. Lall (Halifax, Nova Scotia, Canada), D.M. Anderson (Truro, Nova Scotia, Canada) and	muA
M.A. McNiven (Charlottetown, Prince Edward Island, Canada)  The effect of seven binding agents on 24-hour water stability of an artificial weaning diet for the South African abalone, <i>Haliotis midae</i> (Haliotidae, Gastropoda)	305
J. Knauer, P.J. Britz and T. Hecht (Grahamstown, South Africa)	327
Physiology and Endocrinology	
The influence of temperature, salinity and external calcium on diffusional permeability of the eggs of turbot (Scophthalmus maximus)	
P. Tytler and J. Ireland (Stirling, UK)	335
O. Linhart (Vodňany, Czech Republic), R. Billard (Paris, France) and J.P. Proteau	247
(Montpellier, France)	347
J.D. Toledo (Iloilo, The Philippines), A. Nagai (Tokyo, Japan) and D. Javellana (Iloilo, The Philippines)	361
Author Index	. 369
Contents of Aquaculture, Volume 115	. 373

## Contents (continued)

The effect of seven binding agents on 24-hour water stability of an artificial weaning diet for the South African abalone, <i>Haliotis midae</i> (Haliotidae, Gastropoda)	
J. Knauer, P.J. Britz and T. Hecht (Grahamstown, South Africa)	. 327
Physiology and Endocrinology	
The influence of temperature, salinity and external calcium on diffusional permeability of the eggs of turbot ( <i>Scophthalmus maximus</i> )	
P. Tytler and J. Ireland (Stirling, UK)	. 335
Cryopreservation of European catfish (Silurus glanis L.) spermatozoa	
O. Linhart (Vodňany, Czech Republic), R. Billard (Paris, France) and J.P. Proteau	
(Montpellier, France)	.347
Successive spawning of grouper, <i>Epinephelus suillus</i> (Valenciennes), in a tank and a floating net cage	
J.D. Toledo (Iloilo, Philippines), A. Nagai (Tokyo, Japan) and D. Javellana (Iloilo,	
Philippines)	.361
Author Index	369
Contents of Aguaculture Volume 115	272